

**REMARKS**

Claims 1-13 are pending in the case. Further examination and reconsideration of pending claims 1-13 are hereby respectfully requested.

**Priority Claim Under 35 U.S.C. 119(e)**

The Office Action states: "If applicant desires benefit of a previously filed application under 35 U.S.C. 119(e), specific reference to the earlier filed application must be made in the instant application." (Office Action -- page 2). The Substitute Specification filed in the present case on December 21, 2004 was amended to include a specific reference to the earlier filed application of which the present application claims the benefit. In addition, the Office Action mailed March 22, 2005 in the present case (hereinafter "the prior Office Action") states that "The substitute specification has been entered and it is noted that substitute specification has been amended to include the priority claim under 35 U.S.C. 119(e) to a provisional application which was previously claimed in the declaration." (prior Office Action -- page 2). Therefore, Applicant has met the requirement that a specific reference to an earlier filed application applicant desires the benefit of must be made in the instant application.

The Office Action also states that "the priority claim was not made until 3/28/02, in a declaration, which is outside the period of four months from the filing date of 8/21/01 of the instant application or 16 months from the filing date of the prior application of 8/18/00." (Office Action -- page 3). In addition, the Office Action states that "The requirements for a priority claim under 35 U.S.C. 119(e) have not been met and until they are met the instant application is only entitled to the 8/17/01 filing date." (Office Action -- page 3). The entire delay in filing of the priority claim under 35 U.S.C. 119(e) in the present application was unintentional. A grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e) is filed herewith. Therefore, the conditions for claiming the benefit of the prior application have now been met. Accordingly, acceptance of the benefit claim is respectfully requested.

**Section 102(e) Rejections**

Claims 1-9, 12, and 13 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,884,639 to Dougan et al. (hereinafter "Dougan"). As will be set forth in more detail below, Dougan can no longer be used in § 102 rejections of the present claims.

Dougan claims the benefit of an international application that has an international filing date (March 16, 2001) on or after November 29, 2000, designated the United States, and published under PCT Article 21(2) in English. Therefore, the international filing date is a U.S. filing date for purposes under 35 U.S.C. 102(e). MPEP 2136.03(II.). In addition, the international application, to which Dougan claims the benefit, claims priority to a European patent application. However, the filing date of the European patent application may not be used as a 35 U.S.C. 102(e) date for prior art purposes. Foreign applications' filing dates that are claimed (via 35 U.S.C. 119(a)-(d), (f), or 365(a) or (b)) in applications, which have been published as U.S. or WIPO application publications or patented in the U.S., may not be used as 35 U.S.C. 102(e) dates for prior art purposes. MPEP 706.02(f)(1)(I)(D). (emphasis in original). Therefore, the earliest effective filing date of Dougan under 35 U.S.C. 102(e) is the filing date of the international application (March 6, 2001). As such, Dougan is an intervening reference since it has an effective filing date under 35 U.S.C. § 102(e) after the filing date of the prior-filed application to which the present application claims the benefit (August 17, 2000) and before the actual filing date of the present application (August 17, 2001). Since the conditions for claiming the benefit of the prior application have now been met, the Examiner may no longer use Dougan in § 102 rejections of the present claims. The examiner may use an intervening reference in a rejection until applicant corrects the benefit claim or shows that the conditions for claiming the benefit of the prior application have been met. MPEP 201.11

Accordingly, removal of the § 102 rejections of claims 1-9, 12, and 13 is respectfully requested.

#### **Section 103(a) Rejections**

Claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dougan. Claims 1-2 and 5-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,420,864 to Abraham et al. (hereinafter "Abraham") in view of U.S. Patent No. 6,020,957 to Rosengaus et al. (hereinafter "Rosengaus"). Claims 3, 4, 12, and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham in view of Rosengaus and further in view of U.S. Patent No. 6,591,162 to Martin (hereinafter "Martin"). Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application

Publication No. 2002/0118365 to Kessel et al. (hereinafter "Kessel"). As will be set forth in more detail below, the § 103 rejections of claims 1-13 are respectfully traversed.

As noted above, Dougan can no longer be used in § 102 rejections of the present claims. Therefore, Dougan is no longer available for § 103 rejections of the present claims. Kessel was filed on February 28, 2001. Therefore, the earliest effective filing date of Kessel under 35 U.S.C. 102(e) is the actual filing date of Kessel (February 28, 2001). As such, Kessel is an intervening reference since it has an effective filing date under 35 U.S.C. § 102(e) after the filing date of the prior-filed application to which the present application claims the benefit (August 17, 2000) and before the actual filing date of the present application (August 17, 2001). Since the conditions for claiming the benefit of the prior application have now been met, Kessel is no longer available as an intervening reference under § 102 for rejections of the present claims. Therefore, Kessel is no longer available for § 103 rejections of the present claims. Accordingly, removal of the § 103 rejections of the present claims over Dougan and Kessel is respectfully requested.

To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. *In re Bond*, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). The remaining available cited art does not teach or suggest all limitations of the currently pending claims, some distinctive limitations of which are set forth in more detail below.

**The remaining available cited art does not teach or suggest a pod that is interfaced to a semiconductor fabrication tool at a load port and that includes a mechanism for inspecting or measuring wafers.** Independent claim 7 recites, in part: "a) a semiconductor fabrication tool, for processing semiconductor wafers; and, b) a pod, interfaced to said tool at a load port, wherein said pod includes a mechanism for inspecting or measuring said wafers." Independent claims 1 and 8-11 recite similar limitations.

For at least the reasons set forth in the Amendment; Response filed in the present case on June 22, 2005 (hereinafter "the prior response"), which is incorporated by reference as if fully set forth herein, Abraham, Rosengaus, Martin, and any combination thereof do not teach or suggest a pod that is interfaced to a semiconductor fabrication tool at a load port that includes a

mechanism for inspecting or measuring wafers, as recited in claims 1 and 7-11. Therefore, additional remarks presented herein will specifically address assertions newly raised in the instant Office Action.

The Office Action states that "In response to applicant's arguments, Abraham teaches a pod connected to a load port, if for no other reason than a substrate is loaded into the pod and then moved from the pod after measurement, while Rosengaus provides a fabrication tool environment and is relied on for the reasons given above." (Office Action -- page 9). Although Abraham teaches a modular measurement system that includes a substrate container interface arranged to receive a substrate container and standardized measurement chambers that can be coupled to a standardized mechanical interface of a central substrate handling chamber (Abraham -- col. 1, lines 38-52), Abraham does not teach arranging the standardized measurement chambers on the substrate container interface of the modular measurement system or a substrate container interface of a semiconductor fabrication tool. While Rosengaus teaches coupling a modular optical inspection system to a multi-stage integrated circuit manufacturing system (Rosengaus -- col. 3, lines 1-10), Rosengaus does not teach coupling the modular optical inspection system to a load port of the multi-stage integrated circuit manufacturing system. As such, contrary to the assertion in the Office Action, Abraham and Rosengaus do not teach or suggest a pod that is interfaced to a semiconductor fabrication tool at a load port and that includes a mechanism for inspecting or measuring wafers, as recited in claims 1 and 7-11.

The Office Action also states that "In regards to applicant's comments about Abraham col. 2, lines 11-15, this section of Abraham is mainly directed to the stocker system which acts as a buffer between the processing and measurement phases. Further Abraham states that such a stocker may reduce delay times not that it always reduces delay time as applicant appears to argue." (Office Action -- page 9).

As noted in the prior response, Abraham states that "Due to the physical separation of the functionality of process tools and measurement tools, the delay times in both the process tools and the measurement tools may be reduced since their respective cycle times are no longer dependent on each other." (Abraham -- col. 2, lines 11-15). Abraham also states that "Such a cluster tool is known from WO 99/49500, in which, in order to reduce cycle time overhead, an inspection tool (e.g. a optical microscope) and one or more review tools (e.g. a

scanning electron microscope and/or an atomic force microscope) are linked by an automation platform that handles wafer transport between the tools and a substrate container interface." (Abraham -- col. 1, lines 9-15). As such, the cycle times that Abraham teaches are preferably not dependent on each other are the cycle times of two different tools such as a measurement tool and a process tool such as a review tool.

Abraham, therefore, suggests to one of ordinary skill in the art that the cycle times of two different tools such as a measurement tool and a different process tool (which includes a semiconductor fabrication tool since a semiconductor fabrication tool is different than a measurement tool) are preferably independent of each other. In addition, Abraham teaches that the cycle times of two different tools are dependent on one another due to an automation platform that links the two tools and handles wafer transport between the tools and a substrate container interface. As would be obvious to one of ordinary skill in the art, coupling one of the measurement chambers of Abraham to a load port of a semiconductor fabrication tool would necessarily result in the measurement chamber and the semiconductor fabrication tool being linked by an automation platform that handles wafer transport between the measurement chamber and the semiconductor fabrication tool. As such, according to the teachings of Abraham, the cycle times of the measurement tool disposed in the measurement chamber and the semiconductor fabrication tool would be dependent on each other in such a configuration, which is disadvantageous for at least the reasons disclosed by Abraham.

Abraham, therefore, appears to teach away from incorporating the measurement tools of Abraham into a load port of a processing tool such as that taught by Rosengaus since as taught by Abraham such a combination would increase the delay times in the process tools and the measurement tools. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). MPEP 2141.02. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: ...The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination. MPEP 2141.

The Office Action further states that "Further in regards to the applied combination, one of ordinary skill in the art recognizes that anytime that the internal environment of a tool whether it be a metrology tool or an actual fabrication tool that the clean environment must be

maintained. As pointed out previously Abraham teaches exchanging different measurement tools." (Office Action -- page 9). However, as is known by one of ordinary skill in the art, the environments within measurement tools and semiconductor fabrication tools are often drastically different. For instance, the environments within semiconductor fabrication tools often contain hazardous chemicals that if released to the environment outside of the semiconductor fabrication tools can have disastrous and expensive implications such as fab shut down, exposure of operators to the chemicals, and expensive clean up. The environments in measurement tools, however, do not contain such hazardous chemicals.

Abraham discloses that measurement chambers can be replaced on a central substrate handling chamber of a substrate measurement system by a standardized mechanical interface (Abraham -- col. 1, lines 38-52). In addition, Abraham discloses that the substrate handling chamber and the measurement chambers may have controlled environments (Abraham -- col. 5, line 58 - col. 6, line 16). However, Abraham does not disclose any method or system configuration that can be used to control the environment in the substrate handling chamber or the measurement chambers during replacement of a measurement chamber. Therefore, the teachings of Abraham suggest to one of ordinary skill in the art that the environments within the substrate handling chamber and the measurement chamber are not controlled during measurement chamber replacement, but are re-established after measurement chamber replacement. As such, Abraham does not teach or suggest any method or system configuration that can be used to control the environments in the substrate handling chamber and the measurement chambers of any system including a semiconductor fabrication tool during replacement of a measurement chamber.

As a result, there can be no reasonable expectation of success that the measurement chambers taught by Abraham can be coupled to a semiconductor fabrication tool in locations taught by Rosengaus without interrupting or altering the environment within the semiconductor fabrication tool. In addition, since the environment within a measurement system is substantially different than the environment within a semiconductor fabrication tool, even if Abraham taught a method or system configuration that did not substantially interrupt the environment within the measurement system during measurement chamber replacement, there is no reasonable expectation of success that such a method or system configuration could be used to replace measurement chambers on a semiconductor fabrication tool without the disastrous consequences noted above. Therefore, the prior art cannot be modified as suggested in the

Office Action to reject the present claims as *prima facie* obvious since there is no reasonable expectation of success. The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). MPEP 2143.02. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:...Reasonable expectation of success is the standard with which obviousness is determined. MPEP 2141.

Furthermore, as noted above and in the prior response, as is known by one of ordinary skill in the art, interrupting or altering the environment within a semiconductor fabrication tool is highly undesirable. In addition, as noted in the prior response, Rosengaus teaches that inspection tools are preferably not introduced into the environment of process tools such as semiconductor fabrication tools. As such, the prior art does not suggest the desirability of the modifications of the prior art suggested in the Office Action. Therefore, the combination and modifications of Abraham and Rosengaus suggested in the Office Action are not obvious. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). (emphasis in original). MPEP 2143.01.

For at least the reasons set forth in the prior response and above, none of the remaining available cited art, either individually or in any combination thereof, teaches or suggests a pod that is interfaced to a semiconductor fabrication tool at a load port and that includes a mechanism for inspecting or measuring wafers, as recited in claims 1 and 7-11. Consequently, the remaining available cited art does not teach or suggest all limitations of claims 1 and 7-11.

For at least the reasons stated above, claims 1 and 7-11, as well as claims dependent therefrom, are patentably distinct over the cited art. Accordingly, removal of the § 103 rejections of claims 1-13 is respectfully requested.

### CONCLUSION

This response constitutes a complete response to all issues raised in the Office Action mailed September 9, 2005. In addition, the art cited but not relied upon is not believed to be pertinent to the patentability of the present claims. In view of the remarks presented herein, Applicants submit that pending claims 1-13 are in condition for allowance. If the Examiner has

any questions, comments, or suggestions, the undersigned earnestly requests a telephone conference.

The Commissioner is authorized to charge any fees which may be required or credit any overpayment to deposit account number 50-3268/5589-04400.

Respectfully submitted,



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